

CLAIMS

1. A classification dictionary updating apparatus comprising:
 - 5 an update proposal receiving unit that receives a proposal for updating a hierarchical classification dictionary which has a hierarchical structure which includes a class that defines the hierarchical structure, a property that defines a hierarchical class structure, and
 - 10 an attribute that is a detailed information field of the class and the property, and in which a sub classification class inherits a property of an upper classification class;
 - 15 a proposal history storing unit that stores the past received proposal;
 - 20 an approximate proposal extracting unit that extracts the past received proposal stored by the proposal history storing unit approximate to the latest received proposal; and
2. The classification dictionary updating apparatus according to claim 1, wherein the proposal presented by the approximate proposal presenting unit contains a content of the proposal received by the update proposal receiving unit, a result of evaluation indicating one of rejection and acceptance of the proposal received by the update proposal receiving unit, a content of a comment on the proposal received by the update proposal receiving unit, and information on a degree of approximation that is a result of calculation of the degree of approximation.
3. The classification dictionary updating apparatus

according to claim 1, wherein when the received proposal is a proposal for editing one of an existing class and an existing property, the approximate proposal extracting unit searches the proposal history storing unit for a proposal with a highest degree of approximation based on one of an attribute of the proposal for editing and a content of the proposal for editing to extract a proposal approximate to the proposal for editing.

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10 4. The classification dictionary updating apparatus according to claim 1, wherein when the received proposal is a proposal for adding one of a new class and a new property, the approximate proposal extracting unit searches the proposal history storing unit for a proposal with a highest value of accumulated degree of approximation based on respective attributes of the proposal for adding, to extract a proposal approximate to the proposal for adding.

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20 5. The classification dictionary updating apparatus according to claim 1, wherein when the received proposal is a proposal for adding a new class, the approximate proposal extracting unit searches the proposal history storing unit for a proposal with a highest degree of similarity to a collection of properties of the proposal for adding, to extract a proposal approximate to the proposal for adding.

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30 6. The classification dictionary updating apparatus according to claim 1, further comprising an addition target searching unit that is configured to, when the received proposal is a proposal for adding one of a new class and a new property, advise of an addition target where the proposal for adding is to be added, according to a location

of the proposal extracted by the approximate proposal extracting unit.

7. The classification dictionary updating apparatus
5 according to claim 6, wherein when the received proposal is a proposal for adding a new class, the addition target searching unit advises of the addition target according to a hierarchical structure of the proposal found as a result of search based on a part or a whole of properties of the
10 proposal for adding.

8. The classification dictionary updating apparatus according to claim 6, wherein when the received proposal is a proposal for adding a new class, the addition target searching unit advises of the addition target according to a result of comparison between a property of the proposal found as a result of search based on a content of an attribute of the proposal for adding, and a property of the proposal for adding.
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9. The classification dictionary updating apparatus according to claim 6, wherein when the received proposal is a proposal for adding a new property, the addition target searching unit advises that a class that defines the
25 proposal approximate to the received proposal is presented as the addition target.

10. The classification dictionary updating apparatus according to claim 1, further comprising a proposal advice presenting unit that is configured to advise of a result of evaluation indicating rejection of the received proposal, when the proposal extracted by the approximate proposal extracting unit is identical with the received proposal.
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11. The classification dictionary updating apparatus according to claim 1, further comprising a proposal advice presenting unit that is configured to advise of a result of evaluation of the proposal extracted by the approximate proposal extracting unit as a result of evaluation of the received proposal.
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12. The classification dictionary updating apparatus according to claim 10, further comprising an evaluating and commenting unit that makes a dictionary manager evaluate and give comment on the received proposal according to the result of evaluation given as advice.
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13. The classification dictionary updating apparatus according to claim 11, further comprising an evaluating and commenting unit that makes a dictionary manager evaluate and give comment on the received proposal according to the result of evaluation given as advice.
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14. The classification dictionary updating apparatus according to claim 1, further comprising:
 - a history statistics analyzing unit that generates statistics and analyzes a history of the proposals stored in the proposal history storing unit; and
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 - a reuse proposal presenting unit that extracts a proposal to reuse from the proposal history storing unit according to the statistics and the analysis of the history, notifies a proposer of the reuse, and presents the proposal to reuse.
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15. The classification dictionary updating apparatus according to claim 14, further comprising a degree-of-

attention presenting unit that presents a class, a property, and an attribute with a high degree of attention based on the statistics and the analysis of the history.

5 16. The classification dictionary updating apparatus according to claim 1, further comprising:

a proposal draft receiving unit that receives a proposal approximate to a proposal draft;

10 a simulative approximate proposal extracting unit that makes the proposal extracting unit search for the proposal received by the proposal draft receiving unit; and

a simulative approximate proposal presenting unit that presents the proposal extracted by the simulative approximate proposal extracting unit.

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17. A computer program product having a computer readable medium including computer-executable programmed instructions for updating a classification dictionary, wherein the instructions, when executed by a computer, cause the computer to perform:

receiving a proposal for updating a hierarchical classification dictionary which has a hierarchical structure which includes a class that defines the hierarchical structure, a property that defines a hierarchical class structure, and an attribute that is a detailed information field of the class and the property, and in which a sub classification class inherits a property of an upper classification class;

storing the received proposal;

30 extracting a proposal approximate to the received proposal from the proposals already stored; and presenting the extracted proposal.

18. A method of updating a classification dictionary, comprising:

receiving a proposal for updating a hierarchical classification dictionary which has a hierarchical structure which includes a class that defines the hierarchical structure, a property that defines a hierarchical class structure, and an attribute that is a detailed information field of the class and the property, and in which a sub classification class inherits a property of an upper classification class;

5 storing the received proposal;

extracting a proposal approximate to the received proposal from the proposals already stored; and

10 presenting the extracted proposal.